

**IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
WACO DIVISION**

DYNAENERGETICS EUROPE GMBH, and
DYNAENERGETICS US, INC.,

Plaintiffs,

v.

Civil Action No: 6:21-cv-00371-ADA

PERFX WIRELINE SERVICES, LLC

Defendant.

**DYNAENERGETICS EUROPE GMBH AND DYNAENERGETICS US, INC.'S
RESPONSIVE CLAIM CONSTRUCTION BRIEF**

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Pursuant to the Proposed Scheduling Order (Dkt. 24) and the Standing Order Governing Patent Cases (Dkt. 30), Plaintiffs DynaEnergetics Europe GmbH and DynaEnergetics US, Inc. (collectively, “DynaEnergetics”) submit this Responsive Claim Construction Brief in support of their proposed construction for a disputed term of the asserted patent as well as addressing terms that Defendant XConnect Wireline, LLC (“XConnect”) has proposed for construction.

I. STATEMENT OF THE ISSUES AND SUMMARY OF THE ARGUMENT

Claim construction for the disputed terms of U.S. Patent No. 10,844,697 (the “’697 Patent”) is straightforward. With one exception, each of the terms listed above has a well-understood meaning in the art which the jury will readily understand. Nevertheless, XConnect and the other Defendants in the related ’697 Patent cases¹ have each identified between four and seven terms for construction, and—despite obvious coordination—the Defendants cannot agree on whether certain terms need construction; nor can they agree on what the majority of the terms mean. Rather, each Defendant appears to have approached claim construction largely with the structure and operation of their own accused systems in mind, purposefully choosing purported synonyms, incorporating unnecessary or unsupported verbiage, or rewriting the plain language of the claims. Defendants’ tailored approaches forces DynaEnergetics to submit multiple claim construction briefs for the same patent, including five separate briefs in this District alone. To simplify this process, however, DynaEnergetics submits Exhibit A, a chart of all proffered constructions as proposed by each WDTX Defendant.

Each Defendant—including XConnect—has followed a similar claim construction strategy to narrow the claims of the ’697 Patent by proposing constructions that violate well-established

¹ *DynaEnergetics Europe GmbH v. G&H Diversified Mfg., LP*, No. 6:20-cv-01110-ADA (W.D. Tex.); *DynaEnergetics Europe GmbH v. GR Energy Services Operating GP LLC*, No. 6:21-cv-00085-ADA (W.D. Tex.); *DynaEnergetics Europe GmbH v. NexTier Oilfield Sols., Inc.*, No. 6:21-cv-01201-ADA (W.D. Tex.); *DynaEnergetics Europe GmbH v. Horizontal Wireline Servs., LLC*, No. 6:21-cv-00349-ADA (W.D. Tex.).

claim construction principles and rewriting the claims in a way that introduces ambiguity or imports limitations from the specification. XConnect's constructions disregard the express claim language and the intrinsic record—ostensibly to manufacture non-infringement positions. DynaEnergetics respectfully requests that the Court reject XConnect's proposed constructions and adopt the plain and ordinary meaning of each of these five disputed terms. With respect to the disputed term “connected to,” when read in the context of the ’697 Patent, a person of ordinary skill in the art would understand that the plain and ordinary meaning of the term “connected to” requires that the connected elements be “joined or coupled in a manner that resists separation and not merely by physical contact.” DynaEnergetics respectfully requests that, should the Court find a construction is necessary, the Court adopt this construction.

For U.S. Design Patent No. D904,475 (the “’475 Patent”), XConnect asks this Court to convert the claim construction analysis into a premature dispositive motion for summary judgment. In doing so, XConnect misunderstands and misapplies design patent law, asking this Court to isolate and find individual elements of the design patent to be functional rather than view the claimed design as a whole. Even if it were appropriate to consider functionality now, the claimed design is not primarily functional as evidenced by the numerous available alternative designs for a tandem seal adapter that perform substantially the same functions as the claimed design. Nor is a detailed, verbal construction of the ’475 Patent necessary at this stage. Consistent with Federal Circuit precedent, DynaEnergetics submits that the ’475 Patent should be construed to include the overall visual impression of the claimed design as depicted in the drawings.

II. DISPUTED TERMS

A. The '697 Patent

1. “tandem seal adapter” (asserted claim 1)

DynaEnergetics’ Construction	XConnect’s Construction
No construction needed; plain and ordinary meaning.	“adapter configured to form a seal between two gun carriers that are directly attached to each other”

In contrast to XConnect’s unduly narrow and confusing proposed construction, DynaEnergetics’ position is that no construction is necessary for “tandem seal adapter.” The words of the ’697 Patent claims themselves clearly define the scope of the “tandem seal adapter,” and therefore a POSITA would readily understand the term without further construction. *See Ex. B, Declaration of John Rodgers (“Rodgers Decl.”) ¶¶ 57-60; see also Phillips v. AWH Corp., 415 F.3d 1303, 1312 (Fed. Cir. 2005).*

Because the tandem seal adapter is described in plain and clear terms, a jury will have no problems understanding the scope of what a “tandem seal adapter” comprises without a formal construction. Claim 1 describes the “tandem seal adapter” as “having a first end, a second end and a bore that extends from the first end to the second end and entirely through the tandem seal adapter.” ’697 Patent at 11:21-23. Claim 1 goes on to require that the tandem seal adapter is connected to the outer gun carrier (*id.* at 11:28-29) and that a pressure bulkhead is “sealingly received in the bore of the tandem seal adapter.” *Id.* at 11:30-33. Claim 1 also recites that the “tandem seal adapter and the pressure bulkhead are configured to provide a seal between the detonator and an environment on the second end of the tandem seal adapter.” *Id.* at 11:44-47. There is no ambiguity in this term warranting a formal construction by this Court, and “tandem seal adapter” need not be a term of art in the industry of perforating guns to carry its plain and ordinary meaning. *See Pixion, Inc. v. Citrix Sys., Inc.*, No. C 09–03496 SI, 2011 WL 5191832, at *11 (N.D.

Cal. Nov. 1, 2011). On the other hand, XConnect’s effort to seek a construction of the term “tandem seal adapter” is not about the “tandem seal adapter” at all. Specifically, and without any proper support for doing so, XConnect seeks to define the claimed “tandem seal adapter” component as requiring the presence of at least two perforation guns ***that are directly attached to each other***. In other words, XConnect’s proposed construction for “tandem seal adapter” improperly rewrites the claims to include requirements for entirely separate components in the electrical connection assembly: the “two gun carriers” that need to be “directly attached to each other.” Rodgers Decl. ¶ 61.

The Federal Circuit has rejected the contention that a patent should be construed as being limited to only its disclosed embodiments. *Phillips*, 415 F.3d at 1323; *see also Cont'l Cirs. LLC v. Intel Corp.*, 915 F.3d 788, 797 (Fed. Cir. 2019), *cert. denied*, 140 S. Ct. 648 (2019) (“[W]e conclude that disclosing only the [preferred] embodiment, without more, does not result in a clear disavowal of claim scope.”). However, XConnect’s proposed construction is even narrower than what is disclosed in the patent. XConnect is the only Defendant seeking a construction for the tandem seal adapter that requires “two gun carriers,” even though the ’697 Patent expressly describes an embodiment in which the tandem seal adapter is used with a gun carrier and another tool. ’697 Patent at 10:11-17, FIG. 33.

The plain language of claim 1 expressly defines the structure (first end, second end, bore) and configuration (connected to the first outer gun carrier, configured to provide a seal between the first detonator and an environment on the second end) of the claimed tandem seal adapter. The claimed structure and configuration are shown in the figures. XConnect improperly aims to modify the overall scope of the claimed invention—the claimed electrical connection assembly for establishing an electrical connection in a tool string—through its proposed construction of this

term. XConnect has failed to identify any language in the intrinsic record that limit the tandem seal adapter to merely an “internal component”—because no such disavowal of claim scope exists. Rodgers Decl. ¶ 66. The ’697 Patent explicitly states that FIGS. 19, 25, 26 and 32 merely illustrate *embodiments* of the claimed invention (*see, e.g.*, ’697 Patent at 4:43-46, 7:58, 8:31), even though those embodiments illustrate the claimed tandem seal adapter as an internal component. Furthermore, even the plain language of the patent itself expressly teaches a POSITA that the claimed invention is not limited to the embodiments, stating that “[n]umerous modifications and variations could be made to the [] embodiments without departing from the scope of the FIGS. and claims, as apparent to a person skilled in the art.” ’697 Patent at 10:30-33. Thus, a POSITA is explicitly taught by the patent that there are other variations to the identified embodiments, such as alternative methods to connect the tandem seal adapter to the outer gun carrier, which would include well-known methods to connect tools like using external threading.

Further, there is simply no evidence in the intrinsic record to support XConnect’s construction of the tandem seal adapter to require an additional limitation that the separate “two gun carriers” sealed by the tandem seal adapter must be “directly attached to each other.” Nothing in the claims, specification, or the prosecution history of the ’697 Patent supports a construction where the tandem seal adapter requires the completely separate “gun carriers” to be “directly attached to each other.” XConnect is attempting to rewrite the claims to insert terms and limitations more to its liking, but claim construction is not an exercise in inserting words and limitations that an accused infringer may wish the inventors had used in place of the words they actually did.

Because there is no support in the intrinsic record for XConnect’s construction, XConnect fabricates a complicated and futile distinction between a tandem seal adapter and a “sub”—a term that appears nowhere in XConnect’s proposed construction—to provide evidence that supports its

proposed construction and to establish a non-infringement position. But XConnect cannot override the plain language of the claims with extrinsic evidence. *See Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1583 (Fed. Cir. 1996) (stating “it is improper to rely on extrinsic evidence” when “an analysis of the intrinsic evidence alone will resolve any ambiguity in a disputed claim term”). Indeed, XConnect’s description of a “sub” does not exclude a tandem seal adapter, as claimed, with first and second ends connected to respective outer gun carriers and a bore for receiving a pressure bulkhead, for forming a seal. *See* Rodgers Decl. ¶¶ 62-65.

Even though XConnect repeatedly points to DynaEnergetics’ statement that “[t]he term ‘tandem seal adapter’ is not a common or accepted industry term” (Dkt. 35 at 7), this statement was made about the term “tandem seal adapter” as used in a different patent, U.S. Patent No. 10,472,938 (the “’938 Patent”). Notably, XConnect ignores the actual claim construction proposed for “tandem seal adapter” in the ’938 Patent PGR² by DynaEnergetics, and instead proposes a more self-serving construction for the tandem seal adapter in the ’697 Patent. DynaEnergetics has explained to the Patent Office that even though the ’938 Patent is in the same family as the ’697 Patent, the plain language of the claims in the ’697 Patent expressly define the claimed “tandem seal adapter,” while the ’938 Patent claims do not, and therefore the proposed construction of a tandem seal adapter is unnecessary for the ’697 Patent. *See* Rodgers Decl. ¶¶ 57-60. Because the claim language itself comprehensively defines for a POSITA the full scope of a tandem seal adapter consistent with the ’697 Patent description, no construction is needed for this term.

2. “connected to” (asserted claim 1)

DynaEnergetics’ Construction	XConnect’s Construction
Plain and ordinary meaning, which is “joined or coupled to, in a manner that resists separation and not merely by	“joined or coupled together”

² PGR2020-00080 was not instituted against the ’938 Patent. *Hunting Titan, Inc. v. DynaEnergetics Europe GmbH*, PGR2020-00080, Paper 7 (PTAB Feb. 12, 2021).

physical contact"	
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Though claims are given their ordinary and customary meaning, they must be construed “as understood by a [POSITA] . . . when read in the context of the specification and prosecution history.” *Laryngeal Mask Co. v. Ambu A/S*, 618 F.3d 1367, 1370 (Fed. Cir. 2010). Here, a POSITA would understand that, consistent with the industry usage of the term, the term “connected to” as used in the claims of the ’697 Patent means “joined or coupled in a manner that resists separation and not merely by physical contact.” *See Callicrate v. Wadsworth Mfg., Inc.*, 427 F.3d 1361, 1366-67 (Fed. Cir. 2005) (“Importantly, the person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification.”).

While “connected to” may appear readily understandable, it is important in the context of the ’697 Patent claims to expressly define this term as requiring a secure coupling or joining together. The claimed connection can be achieved by threading and/or o-rings to provide a firm and secure connection between the tandem seal adapter and the outer gun carrier. *See* Rodgers Decl. ¶¶ 71-72. In contrast, a mere touching or fitting together or physical contact alone would not be sufficient for two components to be “connected to” each other as claimed in the ’697 Patent because there would be no secure resistance to separation. *Id.* ¶ 71.

While XConnect overcomplicates DynaEnergetics’ proposed construction by attempting to further construe and define the phrases “resists separation” and “not merely by physical contact,” a POSITA would easily understand from the context and plain language of the ’697 Patent how a connection would resist separation not just from physical contact. Demonstrating this required resistance to separation, the term “connected to” is used in claim 1 to describe the relationship between the tandem seal adapter (discussed above) and a “first outer gun carrier.”

'697 Patent at 11:24-29. Claim 1 also requires the tandem seal adapter to be “configured to provide a seal between the detonator and an environment on the second end of the tandem seal adapter.” *Id.* at 11:44-47. Accordingly, a POSITA would understand that the claimed tandem seal adapter is “connected to” the first outer gun carrier in a manner that is sufficiently secure as to provide a seal between an interior of the first outer gun carrier (*i.e.*, as recited by claim 1, “the first detonator [is] positioned within the first outer gun carrier”) and the second end of the tandem seal adapter.

However, a POSITA would also understand that a firm and secure connection between the tandem seal adapter and the outer gun carrier could be achieved by multiple different methods (e.g., with the use of threading, o-ring seals, etc.). *See* Rodgers Decl. ¶ 72. For example, a POSITA would clearly understand that a threaded connection between two components would resist separation through the use of interlocking threads, and therefore would be appropriately “connected to” each other. *Id.* Accordingly, in the context of the '697 Patent, a POSITA would understand the term “connected to” to mean “joined or coupled in a manner that resists separation and not merely by physical contact.”

3. “pin connector assembly” (asserted claim 1)

DynaEnergetics’ Construction	XConnect’s Construction
No construction needed; plain and ordinary meaning.	“plurality of parts that are fitted together to form a component with pins for electrically connecting two guns or tools.”

The meaning of “pin connector assembly” in the context of the oil and gas wellbore perforating equipment industry is clear and requires no construction because it is described in the specification and claims of the '697 Patent, consistently used in the field, and well-understood by a POSITA. *See* Rodgers Decl. ¶¶ 85-86. For example, claim 1 recites that the pin connector assembly “extend[s] through the pressure bulkhead from a first pin connector end to a second pin connector end” and is “configured to relay an electrical signal from the first end of the pressure

bulkhead to the second end of the pressure bulkhead.” ’697 Patent at 11:33-38; *see also* Rodgers Decl. ¶ 87. The ’697 Patent teaches, in one exemplary embodiment (FIG. 32, below (annotated)), that the pin connector assembly includes, among other things, coil springs and pin connector ends. ’697 Patent at 8:36-42. In another exemplary embodiment, the pin connector assembly may be a single conductive piece including pin connector ends, without springs, as shown in FIG. 19 below (annotated). *See* Rodgers Decl. ¶ 87. In each embodiment, the pin connector assembly including pin connector ends is dimensioned to electrically contact and extend from a conductor slug in one perforation gun to a bulkhead connector element in an adjacent perforation gun.

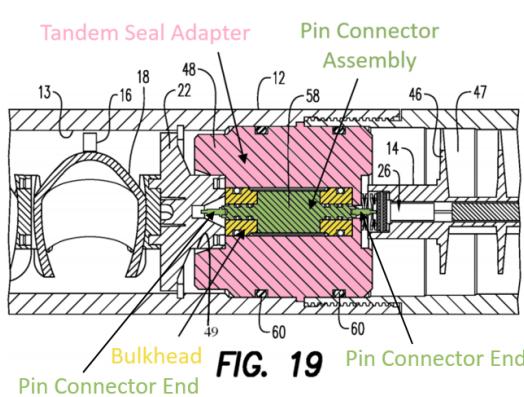


FIG. 19 Pin Connector End

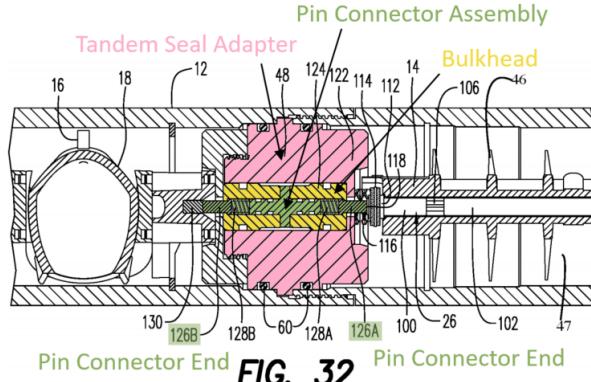


FIG. 32 Pin Connector End

XConnect’s proposed construction, on the other hand, completely ignores the intrinsic record of the ’697 Patent (and well-established claim construction principles) by importing only one preferred embodiment into the construction while excluding another preferred embodiment.

XConnect defines the term “pin connector assembly” as a “plurality of parts that are fitted together to form a component with pins for electrically connecting two guns or tools,” in order to narrow the claim scope of a “pin connector assembly” to require multiple separate components. However, XConnect’s proposed construction excludes the preferred embodiment disclosed in FIG. 19, which shows an assembly comprising a single, solid pin connector having a first pin connector end and a second pin connector end that extends through the bulkhead. A “claim interpretation that

excludes a preferred embodiment from the scope of the claim is rarely, if ever, correct.” *Accent Packaging, Inc. v. Leggett & Platt, Inc.*, 707 F.3d 1318, 1326 (Fed. Cir. 2013) (citations omitted). A pin connector assembly comprising a single solid pin connector having the pin connector ends extending through the bulkhead is clearly disclosed in FIG. 19 as a preferred embodiment of the ’697 Patent. *See On-Line Tech. v. Bodenseewerk Perkin-Elmer*, 386 F.3d 1133, 1138 (Fed. Cir. 2004). Thus, while “plurality of parts that are fitted together to form a component with pins for electrically connecting two guns or tools,” may be an example of a “pin connector assembly,” the embodiment shown in FIG. 19 demonstrates the term is not limited as such. *SynQor*, 709 F.3d at 1378-79; *see also* Rodgers Decl. ¶ 86.

Furthermore, XConnect’s proposed construction includes additional language that is either entirely redundant or unduly limiting, where the construction requires the “plurality of parts” to be “fitted together” in order “to form a component with pins” that is “electrically connecting” either “two guns or tools.” These additional limitations and redundant terms in XConnect’s proposed construction are unnecessarily confusing, and XConnect has provided no basis for writing this language into the construction of “pin connector assembly.” *See Motorola, Inc. v. VTech Commc’ns, Inc.*, No. 5:07CV171, 2009 WL 2026317, at *8 (E.D. Tex. July 6, 2009) (“[W]here additional language may be unduly limiting, confusing, or redundant, it is in a court’s power to determine that no construction is necessary.”). Though XConnect also pointed to two examples where the word “assembly”³ was used in the specification to support their construction, this does not come close to the “highly persuasive evidentiary support” needed for a claim construction that excludes a preferred embodiment. *SynQor*, 709 F.3d at 1379.

Because its proposed construction is incompatible with the specification, XConnect cites

³ In one example, XConnect pointed to the word “assembles,” which is a verb and not the same type of “assembly” at issue here.

to extrinsic definitions for the term “assembly” that are largely irrelevant in the context of the ’697 Patent. XConnect also points to an inapposite claim construction decision in a case concerning a medical device patent to support its position that “the Court should reject any argument that a ‘pin connector assembly’ includes a solitary component.” Dkt. 35 at 11. These flimsy extrinsic definitions cited by XConnect are—yet again—not sufficient to support a reading that would exclude a preferred embodiment. *SynQor*, 709 F.3d at 1379. This extrinsic evidence does not override the clear disclosures in the ’697 Patent that does not require a “pin connector assembly” having a plurality of parts that are fitted together to form a component with pins. Thus, a POSITA would understand that the plain and ordinary meaning of the “pin connector assembly” as disclosed in the ’697 Patent can be either a single component or a plurality of components including the claimed features. *See* Rodgers Decl. ¶ 85.

4. “it is not possible to interrupt the electrical signal from the first pin connector end to the second pin connector end” (asserted claim 2)

DynaEnergetics’ Construction	XConnect’s Construction
No construction needed; plain and ordinary meaning.	Indefinite and/or Not Enabled.

Indefiniteness and non-enablement must be proven by clear and convincing evidence. *Sonix Tech. Co. v. Publ’ns Int’l, Ltd.*, 844 F.3d 1370, 1377 (Fed. Cir. 2017); *Cephalon, Inc. v. Watson Pharms., Inc.*, 707 F.3d 1330, 1336 (Fed. Cir. 2013). XConnect cannot meet its burden.

Functional terms, such as the above-claimed phrase, are not inherently indefinite. *Nevro Corp. v. Bos. Sci. Corp.*, 955 F.3d 35, 39 (Fed. Cir. 2020). In fact, the Federal Circuit has held that “functional language can promote[] definiteness because it helps bound the scope of the claims by specifying the operations that the [claimed invention] must undertake.” *Id.* (quotations and citation omitted). When a claim limitation is defined in “purely functional terms,” a determination of whether the limitation is sufficiently definite is “highly dependent on context (e.g., the disclosure

in the specification and the knowledge of a person of ordinary skill in the relevant art area).” *Id.* The materials, assembly, and electrical concepts disclosed in the ’697 Patent, in addition to the common knowledge in the industry, provides “a general guideline and examples sufficient to enable a person of ordinary skill in the art to determine the scope of the claims.” *Id.*; *see also* Rodgers Decl. ¶¶ 99-105, 107-08. Further, as the MPEP explains: “A patent need not teach, **and preferably omits**, what is well known in the art.” MPEP § 2164.01 (emphasis added). Based on common knowledge in combination with the teachings of the ’697 Patent, a POSITA would have a firm understanding of the materials, assembly, and electrical concepts required to carry out these aspects of the claimed invention. *See* Rodgers Decl. ¶¶ 99-105, 107-08.

An important and novel aspect of the claimed invention includes the ’697 Patent’s short, stiff pin connector assembly that is superior to the prior art teachings of wires that are vulnerable to cutting, crimping, or other damage. In addition, the ’697 Patent also discloses that the pin connector assembly is protected by a pressure bulkhead and a portless tandem seal adapter that does not include internal wired connections that may be prone to damage, disconnection, or wiring mistakes. *See* Rodgers Decl. ¶¶ 100-05; *see also* ’697 Patent at 11:18-47. Thus, the portless tandem seal adapter prohibits access to the pressure bulkhead and pin connector assembly that are “sealingly received” within the tandem seal adapter. *See* Rodgers Decl. ¶¶ 100-05; *see also* ’697 Patent at 6:13-15, 6:28-38. Accordingly, with the context of the relevant industry knowledge, a POSITA would recognize that the improvements taught by the ’697 Patent provide reasonable certainty about the claimed inventions’ scope—which is that it would not be possible to interrupt the electrical signal from the first pin connector end to the second pin connector end, due to the portless tandem seal adapter that does not allow access to the pressure bulkhead and pin connector assembly. *See* Rodgers Decl. ¶¶ 107-08.

Furthermore, the prosecution history supports that a POSITA would readily understand the scope of this claim term. In an office action, the examiner alleged that the pin connector assembly disclosed in the Schacherer reference met the claim limitation “wherein it is not possible to interrupt the electrical signal . . . from the first end [] to the second end [] of the pressure bulkhead.” Ex. E, Nov. 12, 2019 Office Action, at 4. While the patentee eventually overcame this objection, the examiner was clearly able to recognize the definite scope of the functional limitation, “it is not possible to interrupt the electrical signal,” evidencing that a POSITA would understand the teaching in the ’697 Patent as providing the proper basis and scope for the limitation “it is not possible to interrupt the electrical signal.”

Moreover, the use of the claimed pin connector assembly would allow a POSITA to build an electrical connection assembly “wherein it is not possible to interrupt the electrical signal from the first pin connector end to the second pin connector end” without undue experimentation. Rodgers Decl. ¶¶ 100-05. XConnect’s expert’s explanation of the “risk of breakage caused by extreme pressure, shock or heat” (Dkt. 35-14 ¶ 24), are either the sort of damage or operator error endemic in traditional, wired perforation guns that the ’697 Patent expressly addresses, or generalized failures that would damage or destroy any electrical connection and are outside of the invention encompassed by claim 2. For example, the ’697 Patent provides that in view of problematic onsite assembly of traditional perforation gun systems, “[i]n an embodiment, all connections are made by connectors, such as spring-loaded connectors, instead of wires, with the exception of the through wire that goes from the top connector 14 to the bottom connector 22, whose ends are connectors.” ’697 Patent at 6:28-32. The ’697 Patent also discloses a portless tandem seal adapter that does not include internal wired connections that may be prone to mistakes in wiring or become damaged or disconnected—the portless tandem seal adapter thus prohibits

access to the pressure bulkhead and pin connector assembly that are “sealingly received” within the tandem seal adapter. *See* Rodgers Decl. ¶¶ 100-05; *see also* ’697 Patent at 6:13-15, 6:28-38.

These are just a few of the ’697 Patent’s teachings of a more robust wireless assembly that eliminates the electrical feedthrough interruptions associated with traditional wired connections accessed and made through a port. The specification and figures of the ’697 Patent describe and show the claimed subject matter more than sufficiently to enable a POSITA to make and use this more robust wireless assembly without undue experimentation, with an understanding that the invention of claim 2 relates to the elimination of wired connections and associated interruptions to the wired electrical feedthrough. A POSITA would understand the teaching in the ’697 Patent as providing the proper basis and understanding for the limitation “it is not possible to interrupt the electrical signal.” Accordingly, the limitation is enabled and not indefinite.

B. The ’475 Patent

XConnect proposes two constructions for the design claimed in the ’475 Patent. First, XConnect proposes that the ’475 Patent be construed to effectively have no scope because, according to XConnect, the only two claimed portions of the design—the so-called “notches” and “o-ring slots” are purely functional and must be excluded.⁴ Alternatively, XConnect suggests that if the Court finds that these features are ornamental and not functional, the claimed design should be construed to require “8 notches in the center collar in the tandem sub.” Dkt. 35 at 2.⁵ Both proposals should be rejected. As explained below, determining whether the claimed design is primarily functional and therefore invalid is not appropriate at the claim construction stage. XConnect’s alternative proposal contradicts controlling Federal Circuit precedent and ascribes a

⁴ DynaEnergetics disagrees with the “notches” and “o-ring slots” nomenclature adopted by XConnect and instead refers to these features of the claimed design as portions of the central raised rib and grooves, respectively.

⁵ XConnect does not propose an alternative construction for the “o-ring slots.”

verbal construction to the claimed design where none is necessary.

1. Functionality is a Question of Fact Not Determined at the Claim Construction Phase

XConnect demands that this Court make a finding of fact at the claim construction stage that the designs claimed in the '475 Patent are purely functional and, as a result, the '475 Patent is invalid. *PHG Techs., LLC v. St. John Cos.*, 469 F.3d 1361, 1365 (Fed. Cir. 2006) (noting that the determination of “[w]hether a patented design is functional or ornamental is a question of fact”). Indeed, XConnect all but admits that adopting its proposed constructions would amount to a determination of invalidity either because the '475 Patent is entitled to no scope whatsoever or because the prior art teaches the claimed design. *See* Dkt. 35 at 2 (arguing that the “notches and o-ring slots are the only portions of the claimed design” and “must be excluded from the scope of the claimed ornamental tandem sub design” because they are “purely functional”); *see also id.* at 6-7 (“If the Court determines the claimed design requires ‘8 notches in the center collar of the tandem sub,’ Plaintiff’s theory of infringement would invalidate the patent.”).

While courts have “not prescribed any particular form that . . . claim construction must take” for a design patent, they have made it clear that claim construction is not the appropriate vehicle by which to determine whether a design patent is functional or ornamental. *Egyptian Goddess, Inc. v. Swisa, Inc.*, 543 F.3d 665, 679 (Fed. Cir. 2008). To the contrary, consistent with guidance from the Federal Circuit, courts have routinely declined to make determinations of functionality at the claim construction phase—instead deferring such determinations until summary judgment or trial. *See Lanard Toys, Ltd. v. Dolgencorp LLC*, 958 F.3d 1337, 1342 (Fed. Cir. 2020) (finding that trial court followed its “claim construction directives to a tee” where the district court construed the design patent as part of its infringement analysis on summary judgment, and not separately during the *Markman* phase); *Weber-Stephen Prods. LLC v. Sears Holding*

Corp., No. 1:13-cv-01686, 2014 WL 5333364, at *10 (N.D. Ill. Oct. 20, 2014) (declining to “accelerate a fact-intensive inquiry, and especially one that, in effect, bears on the validity of [plaintiff’s] design patents, to this early claim-construction stage”); *Chico’s FAS, Inc. v. Clair*, No. 2:13-cv-792-FtM-38DNF, 2015 WL 1125027, at *7 (M.D. Fla. Mar. 12, 2015) (deferring consideration of claim construction until “after the parties have taken discovery and obtained expert reports on the issue of the functional and ornamental features of the patent”); *Furrion Prop. Holding Ltd. v. Way Interglobal Network, LLC*, No. 3:19-CV-566-PPS-MGG, 2021 WL 1625148, at *6-7 (N.D. Ind. Apr. 27, 2021) (declining to consider issue of design patent invalidity “in a vacuum” at the claim construction stage and finding the more proper course would be to raise the issue at summary judgment).⁶ XConnect offers no compelling reason to depart from this typical procedure, and its attempt to invalidate the ’475 Patent under the guise of claim construction is improper.

2. The Design Claimed in the ’475 Patent is Not Primarily Functional

Even if XConnect’s argument was procedurally appropriate (it is not), it fails as a matter of law because the designs claimed in the ’475 Patent are not “purely functional.” Dkt. 35 at 2.

The Federal Circuit has been clear that “a design may contain both functional and ornamental elements” and still qualify for patent protection “as long as the design is not primarily functional.” *Sport Dimension, Inc. v. Coleman Co., Inc.*, 820 F.3d 1316, 1320 (Fed. Cir. 2016) (emphasis added). In determining whether a claimed design is primarily functional, “the overall appearance of the article—the claimed design viewed in its entirety—is the basis of the relevant inquiry, not the functionality of elements of the claimed design viewed in isolation.” *Ethicon*

⁶ The Court in the sole case cited by XConnect—*Sofpool, LLC v. Intex Recreation Corp.*, No 2:07-CV-097, 2007 WL 4522331, at *2 (E.D. Tex. Dec. 19, 2007)—similarly acknowledged that because “[f]unctional design elements can be claimed . . . when they serve a primarily ornamental purpose . . . *it is appropriate to defer functionality determinations to trial*” (emphasis added).

Endo-Surgery, Inc. v. Covidien, Inc., 796 F.3d 1312, 1329 (Fed. Cir. 2015); *Sports Dimension*, 820 F.3d at 1322 (“[D]esign patents protect the overall ornamentation of a design, not an aggregation of separable elements.”); *L.A. Gear, Inc. v. Thom McAn Shoe Co.*, 988 F.2d 1117, 1123 (Fed. Cir. 1993) (“[T]he utility of each of the various elements that comprise the design is not the relevant inquiry with respect to a design patent” because the determination of whether a design is dictated by function requires looking at the design “in its entirety.”). Indeed, it is improper to “entirely eliminate a structural element from the claimed ornamental design,” as XConnect asks this Court to do (Dkt. 35 at 2), simply because “that element also serve[s] a functional purpose.” *Sport Dimension*, 820 F.3d at 1321 (holding that the district court’s construction conflicted with the “principle of design patent claim construction because it eliminates whole aspects of the claimed design”) (emphasis added); *see also Ethicon*, 796 F.3d at 1334 (“[T]he district court’s construction of the Design Patents to have no scope whatsoever fails to account for the particular ornamentation of the claimed design and departs from our established legal framework for interpreting design patent claims.”). One of the most significant—if not dispositive—factors weighing against a finding that a design is primarily functional is the availability of alternative designs that can provide the same or similar functional capabilities as the claimed designs. *Ethicon*, 796 F.3d at 1329-31 (finding that “[w]hen there are several ways to achieve the function of an article of manufacture, the design of the article is more likely to serve a primarily ornamental purpose”) (citing *L.A. Gear*, 988 F.2d at 1123); *Rosco, Inc. v. Mirror Lite Co.*, 304 F.3d 1373, 1378 (Fed. Cir. 2002) (“[I]f other designs could produce the same or similar functional capabilities, the design of the article in question is likely ornamental, not functional.”).

XConnect cannot demonstrate that the appearance of the individual features of the ’475 Patent or the overall design is dictated purely by function. Rather, the overall appearance of the

claimed designs reflects design choices from many available visual alternatives that can perform substantially the same underlying functions as the '475 Patent claims, including aiding in assembly of the perforating gun and sealing perforating gun assemblies. *See* Ex. L, Declaration of Thilo Scharf ¶¶ 5-6. For example, a tandem seal adapter could have a wider or narrower raised central rib than that shown in the drawings of the '475 Patent and achieve the same function as the tandem seal adapter shown in the '475 Patent of allowing assembly of the perforating gun. *Id.* ¶¶ 7-9. Similarly, a tandem seal adapter could have any number of XConnect's so-called "notches" in the central raised rib (including none at all) and still serve the function of aiding in the assembly of the perforating guns. *Id.* ¶¶ 10-13. There is no magic to having eight "notches"—any number of notches, or other configurations, could be used and achieve the same function so long as a hook wrench or other tool is capable of attaching to the tandem seal adapter to assemble the perforating gun. *Id.* The positioning or spacing of the grooves relative to the central raised rib, or the width of the grooves themselves, could also be altered without affecting the function of sealing the perforating gun assemblies. *Id.* In fact, many of DynaEnergetics' competitors, including several competitors that DynaEnergetics has accused of infringing its utility patents (but not the '475 Patent), utilize alternative tandem seal adapter designs that have a different overall appearance than the design in the '475 Patent but nevertheless achieve the same or similar functionality. *Id.* ¶¶ 7-13. Thus, while the central raised rib (or portions thereof) and the grooves of the '475 Patent may each serve a functional purpose, that does not deem them excluded from the claim, particularly where the position of the central raised rib and the grooves relative to one another are also ornamental in nature and there are numerous available alternative designs and positions that could be used and still achieve the same functions as the design claimed in the '475 Patent. *Id.*

¶¶4-13. Because the claimed design is not purely or primarily functional, XConnect's proposed construction should be rejected.

3. The '475 Patent Should Be Construed as the Overall Visual Appearance of the Design as Shown in the Drawings

XConnect proposes two constructions if the Court finds that the claimed design is ornamental and not functional: (1) the claimed design requires “8 notches in the center collar of the tandem sub” or (2) the claimed design requires “a solid offset collar . . . with no notches.” Dkt. 35 at 2. Neither construction is correct.

Unlike utility patents, where the words of the claims define the scope of the invention, the scope of a design patent is “better represented by illustrations” and not easily reduced to a verbal description. *Egyptian Goddess*, 543 F.3d at 679. The Federal Circuit has repeatedly instructed trial courts that “the preferable course [in construing a design patent] ordinarily will be for a district court not to attempt to ‘construe’ a design patent claim by providing a detailed verbal description of the claimed design.” *Id.* (emphasis added); *Crocs, Inc. v. Int'l Trade Comm'n*, 598 F.3d 1294, 1303 (Fed. Cir. 2010) (noting that the general rule in construing design patents is that “the illustration in the drawing . . . is its own best description”). Under this guidance, courts in this Circuit have routinely declined to provide written constructions for design patents and instead construe them to include the overall visual appearance of the claimed article as shown in the drawings. *See Dexas Int'l, Ltd. v. Office Max, Inc.*, No. 6:07-cv-396, 2009 WL 252164, at *4-5 (E.D. Tex. Jan. 30, 2009) (finding that “the claimed designs are better represented by the seven illustrations contained in each patent [than] they could be by a verbal description” where the designs were “relatively uncomplicated, straightforward” and “clearly disclosed within the figures contained in the asserted patents”); *Motorola*, 2009 WL 2026317, at *39-40 (finding that design patent drawings did not need additional, verbal construction); *HFA, Inc. v. Trinidad/Benham*

Corp., No. 6:17-CV-00343-RWS, 2018 WL 1210880, at *4 (E.D. Tex. Mar. 7, 2018) (construing the claimed design as shown and described in the figures of the patent). XConnect has not presented any unique facts that would warrant departure from this “preferable course” and require a verbal construction limited to particular features of the claimed design.

Instead, XConnect argues that alleged differences between the disclosures of the ’673 Application and the ’475 Patent and a comparison of the claimed design with the prior art necessitates a verbal construction. *See* Dkt. 35 at 4 (“Plaintiff’s reliance on earlier figures demonstrates why claim construction is necessary.”); *id.* at 6. These arguments—which effectively require a determination on infringement and invalidity—are premature and more appropriately addressed on summary judgment than during claim construction. *Dexas Int’l, Ltd.*, 2009 WL 252164, at *5-6 (noting that “[w]hile it is easy to intermingle the issues of claim construction and infringement, the distinction must be made” and “the issue currently before the Court—claim construction—will be addressed as such, leaving issues of infringement and injunction for those later stages of the litigation”). To address those issues now, during claim construction, would be improper. *See id.* at *6. Like the court in *Dexas Int’l, Ltd.* and others, the Court here should find that addressing claim construction at this stage does not require a detailed verbal construction—and particularly not the verbal constructions proposed by XConnect—and the claimed design can simply be construed as “the ornamental design of a tandem sub, as shown and described” in the ’475 Patent. Dkt. 1-4 at 1.

III. CONCLUSION

For the reasons set forth herein, DynaEnergetics respectfully requests that the Court reject XConnect’s proposed constructions and adopt DynaEnergetics’ proposed constructions.

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Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that on November 8, 2021, I electronically filed the foregoing document with the Clerk of the Court using the CM/ECF system, which will send notification of such filing *via* electronic mail to all counsel of record.

/s/ Eric H. Findlay

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